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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,586	09/30/2005	Koji Watanabe	Q88153	1996

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EXAMINER	
FEELY, MICHAEL J	

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1796	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,586	WATANABE ET AL.	
	Examiner	Art Unit	
	Michael J. Feely	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 June 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) *13,28 and 29* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14-27 and 30-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :
20080812,
20070308,
20051128,
20050930,
20050707.

DETAILED ACTION

Pending Claims

Claims 1-33 are pending.

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1-12, 14-27, and 30-33) in the reply filed on June 4, 2008 is acknowledged.

2. Claims 13, 28, and 29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 4, 2008.

Claim Interpretation

3. In claims 14-17, 22, 24, 27, and 30, the recitation: *"an adhesive (epoxy resin) paste;" "an interlayer adhesive;" "a non-conductive paste;" "an underfill;" "a die attach film;" "an anisotripic conductive paste;" "an anisotripic conductive film;" "a flip chip tape;"* have been given little patentable weight because these recitations occur in the preamble. A preamble is generally not accorded patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In the instant case, the preamble merely recites the intended use of the adhesive, wherein the prior art can meet this future limitation by merely being capable of such intended use.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 18-22, 25-27, and 30-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 18 *(and dependent claims 19-22, 25-27, and 30)* discloses: an adhesive epoxy resin sheet, with is *obtainable* by forming the curable resin composition according to claim 1 in a sheet form.
- Claim 26 *(and dependent claim 27)* discloses: a conductive connection sheet, which is *obtainable* by embedding conductive fine particles smaller than the thickness of the adhesive epoxy resin sheet in the adhesive epoxy resin sheet according to claim 18.
- Claim 31 discloses: an electronic component joined body, which is *obtainable* by joining a bump-shaped projected electrode of an electronic part to another electrode in electrically connected state by a curable resin composition according to claim 1.
- Claim 32 *(and dependent claim 33)* discloses: an electronic component joined body, which is *obtainable* by joining at least one kind *of* circuit substrate selected from *a* group consisting of a metal lead frame, a ceramic substrate, a resin substrate, a silicon substrate,

a compound semiconductor substrate, and a glass substrate by the curable resin composition according to claim 1.

The use of the word *obtainable* renders an indefinite scope because it is not immediately clear if these materials are indeed *obtained* by the disclosed methods or by some other method. Furthermore, claim 32 features improper Markush language. The substrate material should be selected from *the* group consisting of said substrate materials.

6. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 calls for the inclusion of: a low elastic modulus substance having elastic modulus (G') in a range of $1x10^5$ to $1x10^8$ Pa at 20°C, the low elastic modulus substance being dispersed like *an island in non-compatible state* with the epoxy resin and the solid polymer having the functional group to react with the epoxy group. If this is the case, it is unclear how the overall composition can still satisfy: no phase separation structure being observed in a matrix of a resin when a cured product is dyed with a heavy metal and observed with a transmission electron microscope. The presence of the claimed non-compatible island material appears to yield a *phase separation*.

Claim Rejections - 35 USC § 102/103

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1-6, 12, 14-27, and 30-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yagisawa (JP 2002-241584).

Regarding claims 1-6, 12, 14-24, 26, 27, and 30-33, Yagisawa discloses: ***(1)*** a curable resin composition, which contains an epoxy resin (Abstract: *see A*), a solid polymer having a functional group to react with an epoxy group (Abstract: *see C*) and a curing agent for an epoxy resin (Abstract: *see B*), no phase separation structure being observed in a matrix of a resin when cured (Abstract);

(12) which further contains a low elastic modulus substance having elastic modulus (G') in a range of $1x10^5$ to $1x10^8$ Pa at 20°C, the low elastic modulus substance being dispersed like an island in non-compatible state with the epoxy resin and the solid polymer having the functional group to react with the epoxy group (paragraph 0016: *organic fillers appear to inherently fall within this range*);

(14) an adhesive epoxy resin paste, which comprises the curable resin composition according to claim 1 (Abstract: *inherently capable of intended use*); ***(15)*** an interlayer adhesive which comprises the adhesive epoxy resin paste according to claim 14 (Abstract: *inherently capable of intended use*); ***(16)*** a non-conductive paste, which comprises the adhesive epoxy resin paste according to claim 14 (Abstract: *inherently capable of intended use*); ***(17)*** an underfill,

which comprises the adhesive epoxy resin paste according to claim 14 (Abstract: *inherently capable of intended use*); ***(23)*** wherein conductive fine particles are contained in the adhesive epoxy resin paste according to claim 14 (paragraph 0016); ***(24)*** an anisotropic conductive paste, which comprises the conductive connection paste according to claim 23 (Abstract: *inherently capable of intended use*);

(18) an adhesive epoxy resin sheet, which is *obtained* by forming the curable resin composition according to claim 1 in a sheet form (Abstract); ***(21)*** a non-conductive film, which comprises the adhesive epoxy resin sheet according to claim 18 (Abstract); ***(22)*** a die attach film, which comprises the adhesive epoxy resin sheet according to claim 18 (Abstract: *inherently capable of intended use*); ***(30)*** a flip chip tape, which comprises a conductive connection sheet according to claim 25 (Abstract: *inherently capable of intended use*); ***(26)*** a conductive connection sheet, which is *obtained* by embedding conductive fine particles smaller than the thickness of the adhesive epoxy resin sheet in the adhesive epoxy resin sheet according to claim 18 (paragraph 0016; Examples); ***(27)*** an anisotropic conductive film, which comprises the conductive connection sheet according to claim 26 (Abstract: *inherently capable of intended use*);

(31) an electronic component joined body, which is *obtained* by joining a bump-shaped projected electrode of an electronic part to another electrode in electrically connected state by a curable resin composition according to claim 1 (Abstract);

(32) an electronic component joined body, which is *obtained* by joining at least one kind *of* circuit substrate selected from *the* group consisting of a metal lead frame, a ceramic substrate, a resin substrate, a silicon substrate, a compound semiconductor substrate, and a glass substrate

by the curable resin composition according to claim 1 (Abstract); ***(33)*** wherein the resin substrate is a glass epoxy substrate, a bismaleimidetriazine substrate or a polyimide substrate (*scope still open to the entire group set forth in claim 32*).

Yagisawa fails to explicitly disclose the following properties: ***(1)*** no phase separation structure being observed in a matrix of a resin when a cured product is dyed with a heavy metal and observed with a transmission electron microscope; ***(2)*** wherein the cured product has a single tanδ peak in viscoelasticity spectrometry and the temperature of the peak is 120°C or higher; ***(3)*** wherein the cured product has a swelling ratio of 50% or less measured in a dimethyl sulfoxide solution heated at 120°C; ***(4)*** wherein extracted water obtained by extracting an eluting component of the cured product with hot water at 110°C has pH not lower than 5.0 and lower than 8.5; ***(5)*** wherein extracted water obtained by extracting an eluting component of the cured product with hot water at 110°C has an electric conductivity of 100 μS/cm or lower; ***(6)*** wherein the cured product has a dielectric constant of 3.5 or lower and a dielectric loss tangent of 0.02 or lower; ***(19)*** wherein a heat-cured product obtained by heat curing at a temperature rising rate of 45°C/min has a storage modulus (G') exceeding $1x10^3$ Pa; and ***(20)*** wherein the peak temperature of tanδ based on dynamic viscoelasticity is in a range of-20°C to 40°C before curing and 120°C or higher after curing.

However, it appears that the composition of Yagisawa would have inherently satisfied these properties because it satisfies all of the chemical/material limitations of the instant invention. Furthermore, this prior art composition is free of phase separation when cured. In light of this, it has been found that, "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable.

Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, it appears that the composition of Yagisawa would have inherently satisfied the instantly claimed properties because it satisfies all of the chemical/material limitations of the instant invention. Furthermore, this prior art composition is free of phase separation when cured. If not inherently satisfied by Yagisawa, then the instant invention appears to be an obvious variation thereof.

Regarding claim 25, Yagisawa discloses: ***(25)*** a conductive connection sheet, which comprises the adhesive epoxy resin sheet according to claim 18 and conductive fine particles (paragraph 0016); however, he fails to explicitly disclose that *at least a part of the conductive fine particles are exposed out of the adhesive epoxy resin sheet.*

Based on the relatively high loading of silver flake in the working examples, it appears that at least a portion of the dispersed silver flake would have inherently extended beyond the surface the film. This is due to the limited volume of the binder holding the silver flake.

Therefore, it appears that the film of Yagisawa inherently discloses the limitation of claim 25 because of the relatively high loading of silver flake in the working examples. Due to a limited volume of the binder holding the silver flake, it appears that at least a portion of dispersed silver flake would have been inherently extended beyond the surface of the film. If not inherently satisfied by Yagisawa, then the instant invention appears to be an obvious variation thereof.

10. Claims 1-6, 12, 14-27, and 30-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tanaka et al. (WO 00/78887). US Pat. No. 6,673,441 is an English equivalent document, and it has been relied upon as a translation document. All citations are directed to the US Patent.

Regarding claims 1-6,12, 14-24, 26, 27, and 30-33, Tanaka et al. disclose: ***(1)*** a curable resin composition, which contains an epoxy resin (Abstract: *see 1*), a solid polymer having a functional group to react with an epoxy group (Abstract; *see 2*) and a curing agent for an epoxy resin (Abstract; *see 1*), no phase separation structure being observed in a matrix of a resin when cured (column 6, line 57 through column 7, line 10);

(12) which further contains a low elastic modulus substance having elastic modulus (G') in a range of $1x10^5$ to $1x10^8$ Pa at 20°C, the low elastic modulus substance being dispersed like an island in non-compatible state with the epoxy resin and the solid polymer having the functional group to react with the epoxy group (column 11, line 21 through column 12, line 8: *acrylic rubbers appear to inherently fall within this range*);

(14) an adhesive epoxy resin paste, which comprises the curable resin composition according to claim 1 (Abstract); ***(15)*** an interlayer adhesive which comprises the adhesive epoxy resin paste according to claim 14 (Abstract; column 15, lines 22-62); ***(16)*** a non-conductive paste, which comprises the adhesive epoxy resin paste according to claim 14 (Abstract); ***(17)*** an underfill, which comprises the adhesive epoxy resin paste according to claim 14 (Abstract: *inherently capable of intended use*); ***(23)*** wherein conductive fine particles are contained in the adhesive epoxy resin paste according to claim 14 (column 10, line 60 through column 11, line

20); ***(24)*** an anisotropic conductive paste, which comprises the conductive connection paste according to claim 23 (Abstract: *inherently capable of intended use*);

(18) an adhesive epoxy resin sheet, which is *obtained* by forming the curable resin composition according to claim 1,claim in a sheet form (Abstract; column 13, lines 8-57); ***(21)*** a non-conductive film, which comprises the adhesive epoxy resin sheet according to claim 18 (Abstract; column 13, lines 8-57); ***(22)*** a die attach film, which comprises the adhesive epoxy resin sheet according to claim 18 (column 15, lines 22-62); ***(30)*** a flip chip tape, which comprises a conductive connection sheet according to claim 25 (Abstract; column 15, lines 22-62: *inherently capable of intended use*); ***(26)*** a conductive connection sheet, which is *obtained* by embedding conductive fine particles smaller than the thickness of the adhesive epoxy resin sheet in the adhesive epoxy resin sheet according to claim 18 (column 10, line 60 through column 11, line 20: *inherently smaller than film because particles larger than the film thickness would compromise the film integrity and bond gap*); ***(27)*** an anisotropic conductive film, which comprises the conductive connection sheet according to claim 26 (Abstract: *inherently capable of intended use*);

(31) an electronic component joined body, which is *obtained* by joining a bump-shaped projected electrode of an electronic part to another electrode in electrically connected state by a curable resin composition according to claim 1 (column 15, lines 22-62);

(32) an electronic component joined body, which is *obtained* by joining at least one kind *of* circuit substrate selected from *the* group consisting of a metal lead frame, a ceramic substrate, a resin substrate, a silicon substrate, a compound semiconductor substrate, and a glass substrate by the curable resin composition according to claim 1 (column 15, lines 22-62); ***(33)*** wherein the

resin substrate is a glass epoxy substrate, a bismaleimidetriazine substrate or a polyimide substrate (column 13, lines 22-30).

Tanaka et al. fail to explicitly disclose the following properties: ***(1)*** no phase separation structure being observed in a matrix of a resin when a cured product is dyed with a heavy metal and observed with a transmission electron microscope; ***(2)*** wherein the cured product has a single tanδ peak in viscoelasticity spectrometry and the temperature of the peak is 120°C or higher; ***(3)*** wherein the cured product has a swelling ratio of 50% or less measured in a dimethyl sulfoxide solution heated at 120°C; ***(4)*** wherein extracted water obtained by extracting an eluting component of the cured product with hot water at 110°C has pH not lower than 5.0 and lower than 8.5; ***(5)*** wherein extracted water obtained by extracting an eluting component of the cured product with hot water at 110°C has an electric conductivity of 100 μS/cm or lower; ***(6)*** wherein the cured product has a dielectric constant of 3.5 or lower and a dielectric loss tangent of 0.02 or lower; ***(19)*** wherein a heat-cured product obtained by heat curing at a temperature rising rate of 45°C/min has a storage modulus (G') exceeding $1x10^3$ Pa; and ***(20)*** wherein the peak temperature of tanδ based on dynamic viscoelasticity is in a range of-20°C to 40°C before curing and 120°C or higher after curing.

However, it appears that the composition of Tanaka et al. would have inherently satisfied these properties because it satisfies all of the chemical/material limitations of the instant invention. Furthermore, this prior art composition is free of phase separation when cured. In light of this, it has been found that, "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant

discloses and/or claims are necessarily present – *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, it appears that the composition of Tanaka et al. would have inherently satisfied the instantly claimed properties because it satisfies all of the chemical/material limitations of the instant invention. Furthermore, this prior art composition is free of phase separation when cured. If not inherently satisfied by Tanaka et al., then the instant invention appears to be an obvious variation thereof.

Regarding claim 25, Tanaka discloses: ***(25)*** a conductive connection sheet, which comprises the adhesive epoxy resin sheet according to claim 18 and conductive fine particles (column 10, line 60 through column 11, line 20); however, they fail to explicitly disclose that *at least a part of the conductive fine particles are exposed out of the adhesive epoxy resin sheet.*

Based on the filler loading *(see up 20 volume percent)*, it appears that at least a portion of the dispersed filler would have inherently extended beyond the surface the film. This is due to the limited volume of the binder holding the filler.

Therefore, it appears that the film of Tanaka et al. inherently discloses the limitation of claim 25 because of the filler loading of up to 20 volume percent. Due to a limited volume of the binder holding the filler, it appears that at least a portion of dispersed filler would have inherently extended beyond the surface of the film. If not inherently satisfied by Tanaka et al., then the instant invention appears to be an obvious variation thereof.

Claim Rejections - 35 USC § 103

11. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. (WO 00/78887) in view of Tomiyama et al. (WO 01/74962). US Pat. Nos. 6,673,441 and 7,070,670 are English equivalent documents, and they have been relied upon as translation documents. All citations are directed to the US Patents.

Regarding claims 7-10, Tanaka et al. disclose: ***(7)*** the solid polymer having the functional group to react with the epoxy group is a high molecular polymer having an epoxy group (column 6, line 57 through column 8, line 28) and no inorganic filler is contained (column 10, line 60 through column 11, line 20: *optional component*); ***(9)*** wherein the high molecular polymer having an epoxy group has a weight-average molecular weight (Mw) of 10,000 or higher (column 6, line 57 through column 8, line 28); ***(10)*** wherein the high molecular polymer having an epoxy group has an epoxy equivalent of 200 to 1,000 (column 7, line 36 through column 8, line 28: *appears to be featured in the epoxidized acrylic copolymer, based on molecular weight and copolymerization ratio*). However, they fail to disclose: ***(7)*** wherein the epoxy resin is an epoxy resin having a polycyclic hydrocarbon skeleton in the main chain; and ***(8)*** wherein the epoxy resin having a polycyclic hydrocarbon skeleton in the main chain is an epoxy resin having a dicyclopentadiene skeleton or an epoxy resin having a naphthalene skeleton.

Tomiyama et al. disclose a similar composition *(see Abstract; column 5, line 19 through column 6, line 34)*. Furthermore, they disclose that polycyclic hydrocarbon based epoxy resins, including those based on naphthalene diol, are recognized in the art as suitable for use in this type of adhesive composition. In light of this, it has been found that the selection of known

material based on its suitability for its intended use supports a *prima facie* obviousness determination – *see MPEP 2144.07.*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the instantly claimed epoxy resins, as taught by Tomiyama et al., in the adhesive of Tanaka et al. because the teachings of Tomiyama et al. demonstrate that polycyclic hydrocarbon based epoxy resins, including those based on naphthalene diol, are recognized in the art as suitable for use in this type of adhesive composition.

Regarding claim 11, Tanaka et al. fail to explicitly disclose: ***(11)*** wherein the high molecular polymer having an epoxy group is produced by suspension polymerization method. However, it should be noted that this is a product-by-process limitation. In light of this, it has been found that, "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process," – *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) *(see MPEP 2113)*.

Furthermore, it should be noted that the teachings of Tomiyama et al. demonstrate that this polymerization technique is recognized in the art as a suitable means for producing the copolymer of Tanaka et al. *(see column 13, lines 16-19: pearl polymerization*).

Therefore, it appears that the instantly claimed product-by-process limitation is obviously satisfied by the combined teachings of Tanaka et al. and Tomiyama et al. because patentability is based on the product itself. Furthermore, the teachings of Tomiyama et al. demonstrate that this

polymerization technique is recognized in the art as a suitable means for producing the copolymer of Tanaka et al.

International Search Report.

12. Two references were cited as X-references in the international search report. Yagisawa (JP 2002-241584) has been applied as prior art. Imaizumi et al. (JP 2000-248052) has been considered, but it does not appear to explicitly, inherently or obviously read on the instantly claimed invention.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is (571)272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J Feely/
Primary Examiner, Art Unit 1796

August 17, 2008